

III REMARKS

In the Office Action, claims 1-6, 9-11, 13-17 and 19-21 were rejected under 35 U.S.C. 103 as being unpatentable over the admitted prior art in view of Heck (US 4,653,117), and claims 7, 8, 12 and 18 were rejected under 35 U.S.C. 103 as being unpatentable over the admitted prior art in view of Heck (US 4,653,117) and Rapeli (US 6,510,313) for reasons set forth in the Action. These grounds of rejection were raised also in the prior Office Action.

With respect to the foregoing rejections, it appears to be the examiner's position (note page 3 of the Action) that it would be obvious to offset the local oscillator mixing frequency in the practice of the present invention in view of Heck, such offset to be below the lowest modulation frequency, at a location interpreted by the examiner as being in a spectral null. With respect to the claimed limitation of chip rate (used in describing the spectral null points), the examiner states that the spectral nulls of digitally modulated signals are well known (page 6 of the Action) and that, therefore, it would be obvious, in view of Heck, to offset the local oscillator to a spectral null commensurate with the chip rate.

In order to clarify the examiner's position, a series of interviews were conducted by telephone between the examiner and Applicant's attorney, David Warren, on January 10-11, 2007, and February 5, 2007. In the interviews, there was discussion showing the significance in the use of the novel mixing process of the claimed invention, wherein the mixing reference signal is offset by an offset frequency equal in magnitude to a null frequency (or an integral multiple thereof), and wherein the null frequency equals the chip rate in a digital modulation such as FSK and PSK.

It was argued that there was error in the examiner's position in that the examiner appears to suggest that all null points of a spectrum are equally effective in the practice of the present invention. Therefore, in so far as the examiner's position was

understood, the examiner appeared to conclude that it does not matter if one looks to an offset smaller than channel spacings (to use the language of Heck) or an offset equal to the frequency of the chip rate (as in the practice of the present invention).

The examiner said that he would reconsider the matter, and after conducting a further study of this application, determined that all of the claims adequately distinguish over the teachings of the prior art except for claim 13. He recommended that claim 13 be amended to include the amendatory material added to a number of the claims in the previous amendment filed October 18, 2007. The amendatory material deals with a description of the spectral characteristics of the received signal, and is inserted into claim 13 in the present amendment.

The amendatory passage states that "said signal having a spectral characteristic of a plurality of lobes separated by notches, the notches being at null points located on a frequency axis at multiples of a chip rate from the carrier frequency".

This amendment is believed to meet the requirements of the examiner for distinguishing the claims from the teachings of the cited art, thereby to overcome the rejections and to secure allowance of the claims.

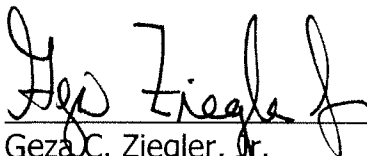
For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any other fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

10/023,559

Response to the Office Action dated 8 December 2006

Respectfully submitted,



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Reg. No. 44,004

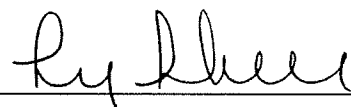
7 MARCH 2007
Date

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